

wherein the processor monitors an out-of-band control channel of the cable network for information indicating that a download of data or programming is available and indicating a specified in-band channel for receiving the download of data or programming offered to said set-top terminal over said cable network, wherein said processor only accepts said download on said specified in-band channel and records said download in said memory unit when one or more predetermined criteria are satisfied, and wherein said criteria when satisfied indicates that acceptance of said download will cause a minimum of interference with said subscriber's use of said set-top terminal.

Claims 24 and 43 recite similar subject matter. In contrast, Bacon fails to teach or suggest a set-top terminal with a processor that monitors an out-of-band control channel for information indicating that a download of data or programming is available on a specific in-band channel.

In this regard, the Examiner refers to Bacon at Col. 8, lines 12-24. This passage of Bacon explains how the set-top descrambles a scrambled signal. The passage reads: "The descrambler control 110 of the MCC 104 utilizes recovered descrambling data to generate appropriate control signals, for example, inversion control and equalizing, sync restoration or regeneration for descrambling, or otherwise restoring the input baseband television signal. A secure microprocessor 136 determines whether the descrambler control 110 of MCC 104 carries out descrambling on a particular channel or what form of descrambling is required at a particular time by interpreting the authorization and control data downloaded from the system manager 12 (by any of the three data transmission schemes discussed herein, out-of-band, in-band audio or in-band video) into the internal NVM memory of the device."

This passage of Bacon teaches that authorization data used to descramble a scrambled channel signal can be downloaded to the set-top from the system manager "by any [one] of the three data transmission schemes discussed herein, out-of-band, in-band audio or in-band video." This passage does not teach or suggest the claimed monitoring of an out-of-band channel that broadcasts an alert that new programming is available on a separate, in-band channel.

The portion of Bacon that actually teaches downloading of new programming for the set-top begins at col. 9, line 25 and continues to col. 11, line 20. At no point in

this discussion, or elsewhere, does Bacon teach or suggest the claimed out-of-band monitoring for information that points the set-top to a specific in-band channel for a download of new programming.

The claimed invention uses two different channels to download programming to the set-top: an out-of-band channel that is monitored for alerts that new programming is available, and an in-band channel referred to by the alert that actually carries the new programming. In contrast, Bacon never mentions using more than one channel in a process of downloading new programming to the set-top.

"A claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). See M.P.E.P. § 2131. For at least this reason, the rejection of claims 1-17, 24-35 and 42-44 should be reconsidered and withdrawn.

Additionally, claim 7 recites that "said one or more criteria include a deadline by which acceptance of said download is required by an operator of said cable network, *said deadline being a specific point in time subsequent to an initial offering of said download of data or programming.*" (emphasis added). Claim 43 recites similar subject matter.

In this regard, the Examiner indicates the teachings of Bacon at Col. 15, lines 57-63. At this point, Bacon teaches that the system operator may include a flag with a download that forces immediate acceptance of the download by the set-top.

The Examiner appears to regard the "immediate flag" taught by Bacon as setting a deadline for accepting a download as claimed. This is clearly incorrect.

Claim 7 recites that a deadline is set which is "a specific point in time *subsequent* to an initial offering of said download." Bacon's immediate flag does not set a deadline that is "subsequent to an initial offering of said download." Rather, Bacon's immediate flag arrives with the initial offering of the download and forces "immediate" acceptance of the download. Thus, Bacon fails to teach or suggest the claimed deadline that is *subsequent* to an initial offering of a download.

"A claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). See M.P.E.P. § 2131. For at least this reason, the rejection of claims 7, 8, 43 and 44 should be reconsidered and withdrawn.

Claim 18 recites:

A set-top terminal for connecting a subscriber to a cable network, said terminal comprising:

a processor; and  
a memory unit,

wherein the processor monitors the cable network for information indicating that a download is available and indicating a specified channel for receiving the offered download, wherein said terminal occasionally receives said download over said cable network of new programming on said specified channel; and

wherein following said download of programming, said processor will only execute said new programming from said download when one or more predetermined criteria are satisfied that indicate executing said new programming will not inconvenience said subscriber.

In contrast, Bacon fails to teach or suggest that following a download of programming, the new programming is not executed until criteria are satisfied indicating that executing the new programming will not inconvenience a subscriber. To the contrary, Bacon clearly teaches that a downloaded program is executed immediate after the download is complete. Specifically, Bacon teaches that "when the transaction count becomes zero [i.e., when the downloading process is complete], the program will jump back to its starting point in block A10, initialize the hardware, and start the control program at the designated start address of the new configuration and control program." (Col. 15, lines 21-26). Thus, Bacon clearly teaches that a downloaded program is executed immediate after the download is complete. There is no consideration of any criteria, as claimed, that would indicate whether execution of the new programming will inconvenience a subscriber.

The Examiner has indicated that the invention of claim 18 is taught by Bacon at col. 15, line 27 through col. 16, line 43. However, Bacon, at the portion cited, teaches using a convenience flag which requires the set-top to have the subscriber

indicate approval before new programming is downloaded. (Col. 16, line 19 *et seq.*). This portion of Bacon only discusses delaying a programming download. It teaches *nothing* about delaying the execution of programming that has already been downloaded as is claimed.

Consequently, Bacon does not teach or suggest that execution of the new programming may be delayed until one or more criteria are satisfied that indicate executing the new programming will not inconvenience the subscriber. "A claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). See M.P.E.P. § 2131. For at least this reason, the rejection of claim 18, and claims that depend from claim 18, should be reconsidered and withdrawn.

Similarly, claim 36 recites:

A method for implementing upgraded programming received in a set-top terminal for connecting a subscriber to a cable network, said method comprising the steps of:

receiving a signal from a headend identifying a specified in-band channel on which a download of upgraded programming is offered, wherein the received signal is obtained via an out-of-band control channel of the cable network; and

terminating execution of existing programming and commencing execution of said upgraded programming only when one or more predetermined criteria are satisfied.

As noted above, Bacon expressly teaches executing new programming immediately after downloading is complete (Col. 15, lines 21-26). Bacon does not teach or suggest "commencing execution of said upgraded programming only when one or more predetermined criteria are satisfied." Consequently, the rejection of claims 36-40 should also be reconsidered and withdrawn.

Claim 41 recites:

A set-top terminal for connecting a subscriber to a cable network, said terminal comprising:

a processor unit comprising a first processor and a second processor;  
and

a memory unit;  
wherein said first processor is dedicated to providing a user interface and said second processor is dedicated to monitoring an out-of-band channel for information indicating that a download of data or programming is available, indicating a specified in-band channel for receiving the download, and managing a download of data or programming offered to said set-top terminal over said cable network through the specified in-band channel such that said first processor can maintain said user interface including user services while said second processor manages the download.

The Examiner alleges that the two processors recited by claim 41 are met by the control microprocessor (128) and the secure microprocessor (136) taught by Bacon. This is a clear misreading of the express teachings of Bacon.

According to Bacon, the control microprocessor (128) both provides a user interface and manages programming downloads. "The subscriber communicates to and controls the microprocessor 128 through an interactive user interface with an on screen display." (Col. 7, lines 53-56). "The control microprocessor 128 contains the boot program . . . . The boot program also provides a loading routine for the downloading of new control code" (Col. 13, lines 54-61).

In contrast, the secure microprocessor (136) is used only for descrambling scrambled signals. "A secure microprocessor 136 determines whether the descrambler control 110 of MCC 104 carries out descrambling on a particular channel or what form of descrambling is required at a particular time by interpreting the authorization and control data downloaded from the system manager 12." (Col. 8, lines 17-22).

Consequently, Bacon fails to teach or suggest a set-top terminal with two processors where one processor manages programming downloads and the other manages a user interface. "A claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). See M.P.E.P. § 2131. For at least this reason, the rejection of claim 41 should be reconsidered and withdrawn.

§ 103 rejections

Claims 5 and 28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bacon in view of U.S. Patent No. 5,373,557 to Diehl et. al. ("Diehl"). Applicants respectfully traverse this rejection. Claims 5 and 28 depend on patentable claims and are therefore also patentable for the reasons explained above. Adding Diehl to Bacon still would not suggest the claimed invention because Diehl only teaches a system that activates decodes during a specified time of day and also does not suggest monitoring an out-of-band channel for information indicating the availability of data or programming on a specified in-band channel. The Office Action therefore fails to establish a prima facie case of obviousness with respect to claims 5 and 28, and withdrawal of the rejection is respectfully requested.

Claims 20 and 38 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bacon in view of U.S. Patent No. 5,987,210 to Iggulden et al. ("Iggulden"). Applicants respectfully traverse this rejection. Adding Iggulden to Bacon still would not suggest the claimed invention because Iggulden only teaches a video system that can detect commercial messages and eliminated them from a video recording. Iggulden fails to suggest monitoring an out-of-band channel for information indicating the availability of data or programming on a specified in-band channel. The Office Action therefore fails to establish a prima facie case of obviousness with respect to claims 20 and 38, and withdrawal of the rejection is respectfully requested.

Claim 23 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Bacon in view of U.S. Patent No. 5,619,250 to Bacon in view of U.S. Patent No. 5,619,250 to McClellan et al. ("McClellan"). Applicants respectfully traverse this rejection. Adding McClellan to Bacon still would not suggest the claimed invention because McClellan only teaches an interactive television system that does not require restarting of a set-top box after receiving upgrades. McClellan fails to suggest monitoring an out-of-band channel for information indicating the availability of data or programming on a specified in-band channel. The Office Action therefore fails to

establish a prima facie case of obviousness with respect to claim 23, withdrawal of the rejection is respectfully requested.

Claims 45 and 46 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bacon in view of U.S. Patent No. 5,619,250 to Bacon in view of U.S. Patent No. 6,141,683 to Kraml et al. ("Kraml").

A method of operating a set-top terminal for connecting a subscriber to a cable network, wherein said set-top terminal comprises a processor and a memory unit, said memory unit storing programming that is executed by said processor during operation of said set-top terminal, wherein said memory unit further comprises at least two versions of said programming, a newer version and an older version, said method comprising:

executing said newer version of said programming upon start-up of said set-top terminal;

receiving a command via said cable network to switch versions of said programming; and

terminating execution of said newer version of said programming and beginning execution of said older version of said programming in response to receipt of said command.

In contrast, Kraml does not teach or suggest a method in which a system controller can send a command to terminate execution of one programming version and initiate execution of another version by a networked device. Kraml only teaches switching programming versions when a previous version has failed an initial integrity check during boot or has "crashed." (Col. 6, line 47-col. 7, line 43).

Thus, the combination of Bacon and Kraml would fail to teach or suggest, "terminating execution of said newer version of said programming and beginning execution of said older version" in response to "receiving a command . . . to switch versions of said programming." For at least this reason, the rejection of claims 45 and 46 should be reconsidered and withdrawn.